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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/725,391      | 12/03/2003  | Pablo deWitt         | 12M-40 US           | 5008             |

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EXAMINER

GRAY, LINDA L

ART UNIT PAPER NUMBER

1734

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/725,391

Applicant(s)

DEWITT, FABIO

Examiner

Linda L. Gray

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2002 and 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**Detailed Action**

**Claim Rejections - 35 USC 103**

**1.** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green (US 5,733,643) in view of Lai and Fedtech.**

**Claim 1**, Green teaches a process for making a ceramic armor plate (c 7, L 7-18) including the following steps:

- (a) affixing a plurality of ceramic armor tiles side by side to form a fixed layer 24 of ceramic armor tiles having a known two-dimensional size (c 6, L 11-25), and
- (b) forming various sized ceramic armor plates therefrom.

**Claims 1 and 11**, Green does not teach how the substrate which includes layer 24 is formed into the plates, i.e., does not teach using an abrasivejet cutter to cut continuously through the substrate.

However, Lai (IDS filed 3-26-04) teaches forming a substrate into various shaped armor pieces using an abrasive waterjet because cutting in this manner allows for unlimited directions of cutting such as curves, corners, and holes, and Fedtech (IDS filed 3-26-04) teaches using such a cutter to armor materials such as ceramics specifically.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have provided in Green a specific method for how the substrate, which includes layer 24, is formed into the plates, i.e., using an abrasivejet cutter to cut continuously through because

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Lai teaches forming a substrate into various shaped armor pieces using an abrasive waterjet because cutting in this manner allows for unlimited directions of cutting such as curves, corners, and holes, and Fedtech teaches using such a cutter to armor materials such as ceramic specifically.

With respect to the limitation of cutting at least two adjacent tiles, the structure of Green modified would provide for cutting at least two adjacent tiles when there are present curves (**claims 1, 7-8, 11, 15**) and/or straight lines (**claims 1, 7, 11, 14**, also) along the cut lines when forming, for example, the body armor of Green.

**Claims 2 and 11**, layer 22 is affixed to backing element 38 via layer 22 where Green indicates the layers to be bonded together (c 2, L 45-54; c 6, L 11-25) such that layer 22 is considered to have an adhesive action on layer 24. **Claims 3 and 11**, Green indicates processing the entire substrate such that cutting in Green modified will be through element 38 also.

***Claim 4**, Green modified does not teach adhesive between the tiles.*

However, it is conventional to provide adhesive between adjacent items of an armored material to keep the tiles from separating and therefore hindering the armor's protective ability, and for this reason it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have provided for such in Green modified.

***Claims 5-6 and 12-13**, Green teaches forming a plurality of plates but not necessarily from the same substrate.*

However, Lai teaches making a plurality of armor pieces from one substrate, and it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have provided in Green forming the plurality of plates from the same substrate because Lai teaches such to be known in the art where the formation of many substrates from the same substrate will maximize use of the substrate and eliminate waste of viable armor material where the cut plates have different sizes.

***Claims 9-10 and 16-17**, Green does not teach the claimed tile dimension.*

However, However, MPEP § 2144.05 indicates that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, In re Aller, 220 F.2d 454, 105 U.S.P.Q. 233, 235 (CCPA 1955), and it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have provided in Green the optimum and/or workable ranges for the tile dimensions to ensure the best armor protection possible.

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**Art of Record**

3. The following prior art is made of record: Neal et al., Krause, Perciaballi, and Sacks et al. demonstrate armor pieces. Blauch et al. and Jahn teach making a material for armor products which is later cut into various armor shapes.

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Gray whose telephone number is (571) 272-1228. The examiner can normally be reached Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla, can be reached at (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

llg

May 31, 2005



LINDA GRAY  
PRIMARY EXAMINER